ATTACHMENT 1

SALINITY REDUCTION ACCOMPLISHMENTS
ASSUMPTIONS AND GUIDELINES

Our accounting will operate on the following assumptions:

A-1. Any BLM field action which can partially or fully stabilize the accelerated soil loss from a saline site will reduce diffuse source salt loading to the Colorado River system.

A-2. A ton of salt loading reduction is of equal importance value anywhere in the Colorado River Basin. It will be the job of Bureau of Reclamation (BOR) to evaluate later where the salt load reduction occurs and what correction factors need to be applied. If needed, BLM will provide additional site specific information to BOR to make necessary tonnage delivery adjustments.

A-3. Salt loading reduction calculations from BLM field actions are best estimated by the resources management and operations/ engineering personnel closely involved with the project. They are professional estimates, and as such, are always subject to revision based upon updated soils, geology or engineering information, land tenure, or resource management objectives.

A-4. Where a salt savings action requires N years to take full effect, assume 1/Nth of the total effect is achieved each year. For example, a plan is implemented to return an allotment to a proper functioning condition in 20 years. The expected 2000 tons of salt savings at full implementation should be credited as 100 tons/year.

In estimating salt load reductions, use these guidelines:

G-1. Salt Yield of Saline Watersheds Without Management and With Active Management: The average annual sediment yield of unmanaged Colorado Plateau saline landscapes ranges from 1 to 18 tons per acre. On such soils, salt yield can be from 0.02 tons/acre on the flatter more sandy sites, to as high as 1-2 tons/acre of dissolved solids (salt) yield on the steepest, strongly dissected badland topography in which fresh unleached subsoil is being constantly exposed.

However, with management, by means of improved plant cover, and through wise management of surface disturbance of marine-derived soils, per acre salt savings of from 0.003 to 0.06 tons are possible. Resources staff can refine estimates based on local surface water records, agricultural statistics, or county extension advice.

G-2. Range and Wildlife Management Effects on Diffuse Sources of Salt Yield: Most range and wildlife project level implementation in part supports a goal of improving watershed condition, reducing accelerated erosion, and keeping water on site for plant growth. Improvements to plant cover, whether enhanced by a change in scheduling of grazing use, rangeland mechanical treatment, or livestock redistribution by water development, generally improves soil infiltration and reduces runoff and soil loss. Potential offsite salt savings are created.

G-3. Recreation Management/Operations: Improved distribution and management of Off-Road Vehicle use (such as stream crossings improvements, culvert installations, partial area closures, and keeping use away from existing watershed improvements or seedings) can potentially reduce pickup and transport of salts.

G-4. Oil and Gas Operations and Compliance: The potential migration of salts offsite or into groundwater systems can be reduced in the oil patch as a result of the effective control of produced water, proper reserve pit construction/abandonment practices (vulnerable area protection), corrective

measures on flowing/abandoned wells, and upgraded road construction and maintenance standards and implementation (including road removal and rehabilitation).

For estimating the salt savings from closing off flowing saline wells, or any point source controls, the gallons per day flow multiplied by the salt concentration in water (milligrams per liter) all divided by the factor 656,330 will give you the tons of salt saved per year.

G-5. The development of plans (e.g. an ecosystem restoration plan) or conduct of studies (a T and E investigation) will not generate salt savings.

G-6. End-of-Year financial management system reports are suggested as a starting point for FY 97 subactivity expenditures.